This report is the result of a brief study of the history of the development of the rare metals industry in the USSR with particular emphasis on the administrative organization of the industry. The aim of the report has been the presentation 25X1
25X1 of as complete a picture as possible of the radium and uranium industries with
25X1 sufficient detail concerning the overall administration of the non-ferrous metals industry to give some understanding of the typical administrative organization of a metallurgical undertaking in the USSR.

Because of the Soviet penchant for coining names for institutes and organizations from the initials or syllables of their much longer titles, these coined names, or initials, have been used frequently and are included in a glossary at the end of the report.

I. Structure of the Ministry of Non-Ferrous Metallurgy[1]

a. Central Administration

The Ministry of Non-Ferrous Metallurgy was established as a separate Commissariat[2] at the beginning of the Third Five Year Plan in 1939 when the Commissariat of Heavy Industry (Narkomtyazhprom) was subdivided by the Sovnarkom or Council of Ministers into six separate Commissariats[3]. It is represented in the Council of Ministers by its Minister Peter F. Lomako and his Vice-Minister I. V. Arkhipov. It has been reported that there are eight deputy Ministers. The central policy committee is apparently a Technical Council (Tekhsoviet)[4] composed of fifty members representing the Academy of Science and the divisions of the Ministry. It is organized in five

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[1] See Figure 1.

[2] Before being separated it was a Chief Administration under the Commissariat of Heavy Industry and was known as Glavtsvetmet.

[3] Ferrous Metallurgy, Non-Ferrous Metallurgy, Fuel Industry, Chemical Industry, Electrical Industry, and Building Industry.

[4] The Technical Council appears to have been organized in late 1946 and may replace 25X1
or only supplement the former Board of the Ministry composed of the Minister and nine members.

sections: mining and geology, metallurgy and ore concentration; metal-working, alloying, and powder metallurgy; mechanics, power, and transportation; and economics, works, and capital construction. This technical council may be part of the Council for Metallurgy and Chemistry, which is an advisory council under the Council of Ministers.

The working divisions of the Ministry consist of about twenty Chief Administrations (Glavnye Upravleniya), or Central Directorates, believed to be located in Moscow, as follows:

Glavalyumini	-	Aluminum Industry
Glavalyuminstroi	-	Construction of Aluminum Enterprises
Glavmedrud	-	Copper Mining
Glavmed	-	Copper Industry
Glavolovo	-	Tin
Glavtsinksvinets	-	Lead and Zinc
Glavnikelkobalt	-	Nickel and Cobalt
Glavzapadzoloto	-	Western Gold
Glavvostokzoloto	-	Eastern Gold
Glavzolotoprodsnab	-	Supply[5] Administration to Gold Industry
Glavvolfram	-	Tungsten
Glavredmet	-	Rare Metals
Glavvtortsvetmet	-	Secondary Non-Ferrous Metals
Glavgeologiya (GGU)	-	Geology
Glavtransupr	-	Transportation
Glavtsvetmetobrabotka	-	Non-Ferrous Metal-Working
Glavtekhupr	-	Technical Administration
GUUZ	-	Higher Education
Glavtsvetmetsnab	-	Non-Ferrous Metals Supply Administration
Glavtsvetmetsbyt	-	Non-Ferrous Metals Distribution

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[5] "Supply" is used here in terms of procurement of food, materials, and equipment for the operating Administrations of the Ministry which do not have their own internal supply offices. Distribution is under a separate Administration (Glavtsvetmetsbyt) which according to Kravchenko was an emergency office created during the war.

b. Field Administration

The operations of the Chief Administrations appear to be carried out by All-Union Trusts[6] which are organized in broad functional units such as geological exploration, mining, metallurgy, etc. The All-Union Trusts are now probably sub-divided into regional trusts defined by the major geographic divisions of the country such as Northwestern, West Siberian, Trans-Baikalian, Trans-Caucasian, Central Asian, North Siberian, etc., though a few appear to be solely All-Union Trusts (particularly those under the Chief Administration for Rare Elements, Glavredmet).

The next sub-division under the All-Union or Regional Trust is the Combine (Kombinat) which may be small or large depending on the type of Trust of which it is a part. Those of the Rare Elements Administration appear to include rather large geographical areas, such as the Central Asia Rare Metals Combine (Sredazredmet). Finally, the Combines themselves are composed of individual local installations such as mines, smelters, rolling-mills, etc., which are referred to generically as "undertakings," (Predpriyatiya).

c. Planning Institutes[7]

In 1932 there was reference to the State Institute for Planning Non-Ferrous Metals Undertakings (Giprotsvetmet), and this has subsequently given birth to specialized planning institutes for the Chief Administrations as well as regional planning institutes for large areas. For example, the Sevgiprotsvetmet has been encountered as late as 1939 which probably was a planning institute for arctic undertakings. In addition the State Institute for Planning Rare Metals Undertakings (Giproredmet), the State Institute for Planning Gold Undertakings (Giprozoloto), and the State Institute for Planning Non-Ferrous Metal Working Undertakings (Giprotsvetmetobrabotka) have been encountered in 1939 and 1940.

d. Research Institutes

Research for the Ministry of Non-Ferrous Metallurgy is carried on by a group of research institutes concerned with the entire field, directly under the Minister, as well as in specialized research institutes under the Chief Administrations and Trusts, ranging in size from All-Union Institutes to individual laboratories in the plants of the Combines. The general non-ferrous metals institutes which are known include the Moscow Institute of Non-Ferrous Metals and Gold of M. I. Kalinin[8] (Mintsvetmetzoloto), the All-Union Industrial Academy of Non-Ferrous Metallurgy (VPATsM-I) which is presumably one of a series, and the Central State Institute of Non-Ferrous Metals (TsGintsvetmet). In addition to these chief research institutes, all of which are believed to be located in Moscow, there are the Northern Caucasus State Institute of Non-Ferrous Metals (Sevkavgintsvetmet), in Ordzhonikidze, the Siberian State Institute of Non-Ferrous Metals (Sibgintsvetmet), which is probably located in Novosibirsk, and perhaps some others.

Some or all of the research institutes are divided into two distinct parts for scientific work and teaching. This latter section in each of the Institutes is evidently controlled by the Chief Administration of Higher Education which may also supervise courses in non-ferrous metallurgy in the general curricula of Soviet universities.

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[6] These trusts are in most cases referred to as All-Union Trusts and are All-Union in extent, though their names would imply only Union Trusts as, for example, "Soyuzredmet" rather than "Vsesoyuzredmet" for the All-Union Rare Metals Trust.

[7] The planning of new undertakings should not be confused with the work of the State Planning Commission which prepares the annual and five-year plans for the Ministries.

[8] Located at No. 3 Krymsk Wall. This is probably the major research institute of the Ministry and is the institute with which Dr. S. P. Aleksandrov, technical adviser to the Soviet delegate on the UN Atomic Energy Commission, has been associated since 1929.

It is beyond the scope of this report to indicate the specialized laboratories under the Chief Administrations except those under the Chief Administration of Rare Metals which are discussed in Part II.

e. Control by MGB and MVD

There is little information on the details of the participation of the MVD and the MGB in the programs of any of the Ministries. Recent information indicates that there is a Controller of the Ministry of Non-Ferrous Metallurgy from the "Ministry of State Control" which undoubtedly refers to the Ministry of State Security (MGB) of which one section is known to be charged with the overseeing of the industrial Ministries and the discovery and correction of causes for failure to fulfill the State Plans. This division probably is the controlling administration of any secret work which may be done by the Ministry of Non-Ferrous Metallurgy, and presumably would be closely connected with the security of uranium production.

The physical security of any secret or strategic undertaking would be protected by the MVD. This probably consists of little more than the guarding of installations and the provision of slave labor, though there are references to the MVD's "Own Industrial Enterprises" in Eastern Siberia which may actually be completely under MVD control with only technical supervision by other Ministries.

The fact that prior to 1943 the MGB was a subdivision of the MVD (then the NKVD) probably has given rise to the belief that many operations which are actually the responsibility of the MGB are under the MVD.

II. Organization of Chief Administration of Rare Metals (Glavredmet)

a. Definition of Rare Metals:

It is impossible to define specifically what is embraced in the term "rare metals." There are four general classes into which non-ferrous metals are divided by the Russians without any obvious criteria: major, rare, minor, and secondary. The major metals are those treated under separate Chief Administrations such as copper, aluminum, etc. Rare and minor metals seem to be grouped together, and it is only since the war that the term "minor" metals has been added to the names of some of the rare metals undertakings, such as, for example, the All-Union Institute of Rare and Minor Metals, which was used in a Moscow broadcast in 1945 for the well-known State Institute of Rare Metals (Giredmet). These rare and minor metals appear to include most other metals, with principal emphasis on the following (arranged roughly in order of importance): tungsten[9], vanadium, tantalum, uranium, radium, thorium and rare earths, molybdenum, antimony, mercury, and bismuth. Platinum and gold are treated under the Chief Administrations of Gold, but in the absence of specific information it cannot be stated whether the other noble metals are also in this group or in the rare metals group. It may be that they have now been included in the euphemistic Chief Administration of Secondary Non-Ferrous Metals (Glavvtortsvetmet) which has existed since at least 1939 but which has been mentioned only twice to date in the literature. It may be that some elements such as calcium, beryllium, barium, etc., are now also controlled by this Administration though there is no indication in the literature that this is so.

b. Central Administration:

A. V. Krylov is at present the representative of Glavredmet on the Technical Council of the Ministry and therefore may be the head of the Administration,

[9] Though recent information indicates that since 1939 tungsten has been removed from the category of "rare metals" and is now treated under a separate Chief Administration (Glavvolfram).

though this is not known[10]. It appears that at the present time there are about seven major subdivisions of the administration dealing with research and production as follows:

1. Research: The principal specialized research institute of Glavredmet is the State Scientific Research Institute for Rare Metals (Giredmet) which is located in Moscow at No. 7-17 Zubovskaya Ulitsa. This Institute was established by official order on 5 September 1931, though it had steadily been growing as the Laboratory of Rare Elements in the Institute of Applied Mineralogy since 1923 under V. I. Glebova. The Director of the Institute in 1936 was V. A. Norkin, and there is no more recent information concerning the directorship. In 1934 the Institute consisted of seven "chemico-technological" groups: radium, vanadium, rare earths, tantalum and niobium, zirconium, extraction of rare elements from industrial wastes, and antimony and mercury. In addition there were five general groups: methods and controls, physical chemistry, electrochemistry, ore enrichment, and geophysics.

   In 1941 two members of the Institute, Golovchiner and Komovskii, reported the construction of a simplified Cauchois-type x-ray spectrograph which had been designed for the analysis of materials containing uranium and other rare elements. The Institute also operates a pilot plant known only as Plant "B", which is probably located in Moscow.

   In 1933 a branch of the Institute was established in Odessa in what had been until then the Ukrainian Chemico-Technological Institute, and is now known as the Ukrainian Branch of the State Institute of Rare and Minor Metals (Ukrgiredmet). The director of the Institute was E. S. Burkser who probably remained as director until at least as late as 1939. The operation of the Institute was interrupted by the war, but in August, 1945 it was announced that it had resumed its old location in Odessa. It does not appear that the Ukrainian Branch has done any intensive work in the field of uranium and radium, though it carried out a rather extensive exploration of radioactive wells in the region in 1935-40.

   At some time prior to 1939 a Siberian Branch of Giredmet (Sibgiredmet) was established, probably in Novosibirsk, though its location is not yet definitely known. Virtually nothing is known of the field of activities of this Institute though there was one reference which connected it with the development of the Chikoya molybdenum deposits.

2. Planning: Similar to the other Chief Administrations of the Ministry of Non-Ferrous Metallurgy, (Glavredmet has a special institute for planning its new developments, known as the State Institute for Planning Rare Metals Undertakings (Giproredmet). This planning institute was established in about February 1936 and undoubtedly grew out of the much older State Institute for Planning Non-Ferrous Metallurgical Undertakings (Giprotsvetmet) of the Ministry. The function of this Institute is to prepare the detailed plans for new plants and mines, etc.

3. Operations: The operational subdivisions of the Chief Administration of Rare Metals consist of All-Union Trusts which are concerned separately with prospecting, mining, production, etc.

[10] Japanese sources believed in 1940 that one Gorlov was the director of Glavredmet. He is otherwise unknown.

These separate trusts are probably outgrowths of the original all-inclusive "Rare Metals Trust" (Soyuzredmet) established in 1927. In addition to the All-Union Trusts there appear to be Chief Divisions (Glavnye Otdely) which have contributory functions. The only such division definitely known is the Chief Division for Capital Construction. The Trusts are further subdivided into regional combines, which probably have the same geographical limits in each trust[11], though these geographical combines are known in detail only for the prospecting trust.

The trusts believed to be operative at the present time are as follows:

(a) All-Union Rare Metals Prospecting Trust (Soyuzredmetrazvedka)

This Trust has been in existence since as early as 1935 as a separate organization. Its operations are now subdivided into regional prospecting Combines which include the Northwestern Rare Metals Prospecting Combine, (Sevzapredmetrasvedka), the Urals Rare Metals Prospecting Combine (Uralredmetrazvedka), the Central Asian Rare Metals Prospecting Combine (Sredazredmetrazvedka) and the West Siberian Rare Metals Prospecting Combine (Zapsibredmetrazvedka). In addition to these there is undoubtedly a Far Eastern Combine (Dalredmetrazvedka) and/or a Trans-Baikal Combine (Zabaikalredmetrazvedka) though neither has been specifically encountered. These regional Combines carry out the geological prospecting of their jurisdictional areas in collaboration with the Division of Geology and Geophysics of the Academies of Science of the USSR and the Union Republics, the Chief Administration of Geology of the Ministry, and probably with the Committee on Geology of the Council of Ministers.

(b) All-Union Rare Metals Mining Trust (Soyuzredmetdobychaskupka)

Little is known of this Trust beyond a single reference to it in 1937. From its Russian title, which means literally "rare metals output buying-up" it may be inferred that the Trust is specifically concerned with the procurement of enriched ores from the mines. This corresponds with other information which suggests that there is an administrative division between the mining of ore and its subsequent metallurgical treatment. To date, however, no reference to such an "All-Union Rare Metals Producing" Combine has been found. It is possible that this is because the reduction of the ores and preparation of pure compounds of the metals may occur in a few centralized plants directly under the Chief Administration such as Redelem in Moscow.

(c) All-Union Rare Metals Food and Supply Trust (Soyuzredmetprodsnab)

The provision of food and supplies to the operating units of the Ministry of Non-Ferrous Metallurgy is the responsibility of specialized "Trusts" under the Chief Administrations. The Rare Metals Food and Supply Trust is evidently further subdivided since reference has been found to the Tungsten Food and Supply Section (Wolframprodsnab) of "the Kombinat exploiting tungsten, uranium, and other mineral deposits in the Soviet Union" referring evidently to Glavredmet or perhaps the Middle Asia Mining Combine.

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[11] And indeed the same subdivisions have been found in some cases in other Chief Administrations.

(d) All-Union Hard Alloys Trust (Soyuztverdosplav)

One of the major points of emphasis of the Soviet rare metals industry has always been the production and fabrication of tungsten and tantalum, and this work has been under a special trust for hard alloys since very early in the history of the industry. It obviously is a field somewhat removed from the rare metals industry and, in fact, between about 1935 and 1937 the Trust was actually removed from the jurisdiction of the Rare Metals Administration. It was returned to Glavredmet in 1937 and has evidently so remained, though this is not definitely known[12]. The Trust controls the principal part of the operations of "Factory A" whose location is not known, and in addition appears to have some interest in the experimental "Factory B" of the State Institute of Rare Metals as well as part of the Rare Elements Plant in Moscow. It undoubtedly controls many fabrication plants at the present time.

In 1936 three were listed, known only as Factories No. 1, 2, and 3. In 1946 it was announced that Ludmila A. Zubkova was appointed director of the new hard alloys Factory No. 522. Photographs indicate that this is a large and modern establishment.

In 1946 the Hard Alloys Trust established its own Research Institute which had probably formerly been the Central Hard Alloys Laboratory of the State Institute of Rare Metals.

III. Early History of Uranium and Radium Industries in the USSR

The rare elements industry in the Soviet Union after the revolution was begun under the Chief Administration of Chemistry (Glavkhim) of the Supreme Soviet of National Economy (VSNKh) which was the forerunner of the Commissariats of Heavy and Light Industry and of Timber. In 1918 it undertook the development of the radioactive ores of the Fergana Region under L. Ya. Karpov and the Academy of Sciences of the USSR. S. P. Alexandrov, who had just graduated from the Leningrad Mining Institute and who recently has become the Technical Adviser on Raw Materials to the Soviet Delegate on the United Nations Atomic Energy Commission, undertook the field work in the Tyuya-Muyun deposits in Fergana. The ores from this deposit were shipped to a chemical plant at Bondyugy near Yelabuga on the Kama River in the Tatar ASSR. Here V. G. Khlopin, who founded the Leningrad Radium Institute in 1922, produced the first ten milligrams of Soviet radium by December 1921.

This early development work was evidently coordinated by the Bureau of Rare Elements (Byurel) which was established by the NTO (Scientific-Technical Division ?) of the VSNKh. The Bureau was composed of T. M. Serbin, V. I. Spitsyn, V. I. Glebova, V. Ya. Riskin as well as representatives from the Institute of Applied Mineralogy, the Institute of Pure Chemical Reagents, the First Moscow State University, the Leningrad Radium Institute, the Urals Division of the Institute of Applied Mineralogy, and the Sverdlovsk Polytechnic Institute. Among the other accomplishments of the group at Bondyugy, in what came to be called the Experimental Radium Plant, were the extraction of thorium and rare earths from imported monazites, the production of polonium from waste sulfides of the radium plant by V. I. Glebova, and the study of radium, uranium, and vanadium chemical technology by I.Bashilov.

In 1923 V. I. Glebova organized a Laboratory of Rare Elements in the Institute of Applied Mineralogy in Moscow where she undertook the design and pilot plant development of processes to be used in the Bondyugy Radium Plant and carried out analysis for this and other organizations. This laboratory evidently was the forerunner of the State Scientific Research Institute of Rare Metals (Giredmet).

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[12] In the light of the reported existence of a separate Chief Administration for Tungsten (Glavvolfram) mentioned above, it is reasonable to suppose that Soyuztverdosplav is now under its control, though, conversely, Glavvolfram may have existed only temporarily during the 1935-37 period.

In 1925 the Experimental Radium Plant at Bondyugy was closed down and it has evidently remained unused to the present time, since a recent report indicates no industrial installations there except a large unused chemical plant. It appears that the emphasis on radium in the USSR was relaxed for a period between 1925 and 1928. In 1926, however, the VSNKh organized a Chief Administration of the Rare Elements Industry (Glavpromredelem)[13] which administered the rare elements production of the country under the All-Union Rare Metals Trust (Soyuzredmet). The director of the trust from the time of its formation until 1930 was V. I. Glebova. The first research undertaken by this Trust was said to have been carried out in a small shop at Mashkova Ulitsa in Moscow, while a pilot plant was established at 5 Pizhevsky Lane (which is, incidentally, the present location of the Seismological Institute of the Academy of Sciences and opposite the offices of the Ministry of Non-Ferrous Metallurgy). This pilot plant was probably the forerunner of the Rare Elements Plant (Redelem), which was said to have been established in 1926 in a tanning factory in Moscow dating from the time of Peter I. In this primitive plant the first ten kilograms of tungsten salts were produced in 1927. In 1928 the plant began reworking the wastes from the old Bondyugy plant and a few salts of uranium and vanadium were produced as well as some radium which was prepared by I. Bashilov and V. I. Vilnianski. At the same time the production of cobalt and cadmium was also undertaken.

In 1930-31 there was a great increase in all of Soviet industry and in the organization of research. It was at this time that A. F. Joffe organized the physico-technical institutes on an All-Union basis and correspondingly the Rare Metals Trust (Soyuzredmet) expanded the Rare Elements plant in Moscow and improved its equipment. The Germans estimated its radium output in 1931 to be two grams of radium per year, corresponding to the processing of about six tons of uranium per year. At the same time the newly formed Commissariat of Heavy Industry (Narkomtyazhprom) established (on 5 September 1931) the State Scientific Research Institute of Rare Metals (Giredmet) in Moscow under the direction of V. I. Glebova at Nos. 7-17 Zubovskaya Ulitsa. This was undoubtedly an outgrowth of the old Laboratory of Rare Elements of the Institute of Applied Mineralogy. Glebova remained the director until 1934 when she was replaced, possibly by V. A. Norkin who was director in 1936.

In 1932 there were plans to construct a new "Rare Elements Plant" at Bobriki (now Stalinogorsk) under the Bobriki Chemico-Technological Combine. It is not known whether this plant was ever constructed, but the absence of references to it in the later literature while reference continues to be made to the Moscow Redelem Plant suggests strongly that the Bobriki plant was not completed before 1939.

In July 1932 the publication of the journal "Redkiye Metally" (Rare Metals) was begun as "the official organ of Soyuzredmet and Glavredmet" which were then subdivisions of the Supreme Soviet of National Economy (VSNKh) which had at that time the status of a Commissariat. The editorial committee included I. Ya. Bashilov, V. I. Glebova, I. M. Krasnopolskii (who was managing editor until "purged" in 1937), S. S. Litvak, S. Ya. Plotkin, V. Ya. Riskin, V. I. Spintsyn, D. I. Sherbakov, and A. E. Fersman.

In 1934 V. I. Glebova resigned most of her positions of responsibility due to ill health and in December 1935 she died, mourned as the leading figure in the rare metals industry in the USSR.

In February 1936 the rare elements industry evidently entered on a new stage when it held a conference on planning of new undertakings out of which came the State Institute for Planning Rare Metals Undertakings (Giproredmet), which has remained until the present time as the central planning organization of Glavredmet. This probably was a subdividing of the older Giprotsvetmet (State Institute for Planning Non-Ferrous Metals Undertakings) which had been formed as early as 1932.

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[13] later called simply the Chief Administration of Rare Metals (Glavredmet) under the Commissariat of Heavy Industry.

In 1936 a review of the world radium industry by B. A. Nikitin of the Leningrad Radium Institute noted that in addition to the exploitation of the Fergana radioactive ores there had recently begun the extraction of radium and mesothorium from radioactive oil brines, which undoubtedly referred to the Ukhta waters. An interesting sidelight in his paper was the rather dim view he took of the future of the radium industry in the light of the newly discovered "technical sources" of artificial radioactivity such as the cyclotron being built at the Radium Institute.

Sometime between 1935 and 1937 the production of hard alloys (under Soyuztverdosplav) was evidently separated from the Chief Administration of Rare Elements (Glavredmet), for in July 1937 an order of the Commissar of Heavy Industry transferred its administration back to Glavredmet. The same order implied that the experimental plant "B" was also separated for a time and it is probable that this plant was then devoted principally to hard alloys, though subsequently it came to be an experimental plant for all of the processes developed at the Institute of Rare Metals. At the same period it was stated that the central organization of the Chief Administration of Rare Metals in Moscow consisted of the following:

Giredmet	-	State Institute of Rare Metals
Redmetrazvedka	-	Rare Metals Prospecting Trust
Giproredmet	-	State Institute of Planning Rare Metals Undertakings
Redmetdobychaskupka	-	Rare Metals Mining
Redmetprodsnab		Rare Metals Industry, Food and Supply

In the same year a Chief Division of Capital Construction was organized.

In March 1937 the trade journal "Rare Metals" showed the sudden effects of the purge. Hysterical articles were written concerning "sabotage in the rare metals industry," detailed studies of the annual plans were made to demonstrate the existence of traitors in the various mines and plants of the industry, and hitherto familiar names began to disappear from the pages of the journal. The editor, Krasnopolskii evidently was removed and shortly his technical editor, E. A. Chebysheva, was replaced by S. S. Danilova, soon to be followed by S. L. Dykman. T. V. Osipova, assistant editor, evidently managed to escape the storm for the duration of the publication, which was merged with the journal "Non-Ferrous Metals" at the end of 1938.

After this time relatively little has been learned of the detailed organization and operation of the Rare Metals industry. In 1941 publication of the journal "Non-Ferrous Metals" ceased for two years during which it, as well as some other similar mining and metallurgical journals, were supposedly published under the title "Non-Ferrous Metallurgy," though no copies have been found. In 1943 publication was resumed under the old title, but the war prevented the arrival of any copies in this country until 1946, all of which have scrupulously avoided references to Russian uranium and radium.

APPENDIX

Glossary of Special Russian Names Used in the Rare Elements Industry

Coined Name	English Name
Byurel	Bureau of Rare Elements (now disbanded)
Gipro- (combining form)	State Institute for Planning -
-redmet	-Rare Metals Undertakings
-tsvetmet	-Non-Ferrous Metals Undertakings

Coined Name	English Name
-tsvetmetobrabotka	-Non-Ferrous Metal-Working Undertakings
GGU	Chief Administration of Geology (See also Glavgeologiya)
Gi -(combining form)	State Scientific Research Institute of
-redmet	-Rare Metals
Glav -(combining form)	Chief Administration of -
-alyuminii	-Aluminum
-alyuminstroi	-Aluminum Enterprise Construction
-geologiya (GGU)	-Geology
-khim	-Chemistry (Reorganized)
-med	-Copper
-medrud	-Copper Mining
-nikelkobalt	-Nickel and Cobalt
-olovo	-Tin
-promredelem	-Rare Elements Industry (now Ministry of Non-Ferrous Metallurgy)
-redmet	-Rare Metals
-snab	-Non-Ferrous Metals Supply
-Tekhupr	-Technical Matters
-Transupr	-Transportation
-tsinksvinets	-Lead and Zinc
-tsvetmet	-Non-Ferrous Metals (now Ministry)
-tsvetmetobrabotka	-Non-Ferrous Metal-Working
-tsvetmetsbyt	-Non-Ferrous Metals Distribution
-volfram	-Tungsten
-vostokzoloto	-Eastern Gold
-Vtortsvetmet	-Secondary Non-Ferrous Metals
-zapadzoloto	-Western Gold
-zolotoprodsnab	-Gold Industries, Food and Supply
GUUZ	Chief Administration of Higher Education
Mintsvetmetzoloto	Moscow Institute of Non-Ferrous Metals and Gold
MGB	Ministry of State Security

Coined Name	English Name
MVD	Ministry of Internal Affairs
Narkomtsvetmet	People's Commissariat of Non-Ferrous Metallurgy
Narkomtyazhprom	People's Commissariat of Heavy Industry
NTO	Scientific-Technical Division (Society?) of VSNKh
Redelem	Rare Elements Plant
Sev -(combining form)	Northern
-giprotsvetmet	-State Institute for Planning Non-Ferrous Metals Undertakings
-kavgintsvetmet	-Northern Caucasus State Institute of Non-Ferrous Metals
-zapredmetrazvedka	-Western Rare Metals Prospecting Combine
Sibgintsvetmet	Siberian Branch of State Institute of Non-Ferrous Metals
Soyuzredmet- (combining form)	All-Union (lit. "union") Rare Metals Trust for-
-dobychaskupa	-Mine Output Procurement
-prodsnab	-Food and Supply
-razvedka	-Prospecting
Soyuztverdosplav	All-Union Hard Alloys Trust
Sredazredmet	Central Asia Rare Metals Combine (now subdivided into specialized combines for prospecting, mining, etc.)
Sredazredmetrazvedka	Central Asia Rare Metals Prospecting Combine
Tekhsoviet	Technical Council of Ministry of Non-Ferrous Metallurgy
TsGintsvetmet	Central State Institute of Non-Ferrous Metallurgy
Ukrgiredmet	Ukrainian Branch of State Inst. of Rare Metals
Uralredmetrazvedka	Urals Rare Metals Prospecting Combine
Volframprodsnab	Food and Supply Combine of Tungsten Industry
VPATsM-1	All-Union Industrial Academy for Non-Ferrous Metals, No. 1
VSNKh	Supreme Soviet of National Economy (now disbanded
Zapsibredmetrazvedka	West Siberian Rare Metals Prospecting Combine